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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,135	02/05/2002	David Wayne Schroeder	5490-000220	7517

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EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER
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3732

DATE MAILED: 08/01/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/068,135

Applicant(s)

SCHROEDER, DAVID WAYNE

Examiner

Anu Ramana

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/5/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 6/9/03 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman et al. (US 5,879,404) in view of Kennedy et al. (US 5,409,777).

Bateman et al. disclose a composite acetabular component having a ceramic bearing liner or "insert member" 2 and an outer shell or "backing member" 3 wherein the outer shell is made of a thermoplastic material such as polymethylmethacrylate, polyethylene or ultra-high molecular weight polyethylene (col. 1, lines 30-39, col. 2, lines 43-47, lines 66-67 and col. 3, lines 1-4).

Bateman et al. further disclose a method of making a composite acetabular component having the steps of: providing a ceramic insert member 2; providing a thermoplastic material; softening the thermoplastic material (e.g. injection or compression molding (col. 4, lines 37-41); and contacting the outer surface of the ceramic insert member 2 with the softened thermoplastic material to form backing member 3 around insert 2 (col. 4, lines 27-33 and lines 37-41).

Bateman et al. do not disclose that the outer surface of ceramic insert 2 is provided with texture.

Kennedy et al. teach that adhesion between a polymer layer and an underlying ceramic layer is enhanced by surface preparation or texturing such as scratching or etching ("surface depressions or roughness")(col. 14, lines 25-28).

Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention was made to construct the composite acetabular component of Bateman et al. with the outer surface of insert member 2 having a texture, in view of Kennedy et al., in order to enhance adhesion of insert 2 with backing member 3.

With regard to claims 4-5 and 13-14 it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the composite acetabular

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component of the combination of Bateman et al. as modified by Kennedy et al. with a texture or "roughened surface" having an arithmetic mean roughness in a range of about 5 to about 10 microns or a ten-point mean roughness in a range of about 50 to about 75 microns since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With regard to claim 19, Bateman discloses an acetabulum replacement system including an acetabulum member 12 and a composite acetabular component having a ceramic insert member 11 and a thermoplastic backing member 13 wherein the composite acetabular component is secured or molded to the acetabulum member 12 (Figure 5 and col. 5, lines 41-48). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to construct the acetabulum replacement system of Bateman et al. with the outer surface of insert member 11 having a texture, in view of Kennedy et al., in order to enhance adhesion of insert 11 with backing member 13.

With regard to the method steps of claims 21-30, the step of imparting a texture to the outer surface of ceramic insert member 2 and contacting the textured outer surface of ceramic insert member 2 with the softened thermoplastic material, it is noted that these steps will be inherent in the combination of Bateman et al. as modified by Kennedy et al.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman et al. in view of Kennedy et al., further in view of Sherman (US 4,936,855).

Sherman teaches a conventional hip replacement system as having an acetabulum-type cup member and a spherical head member which mates with and is rotatably supported by the spherical cavity of the cup member for articulated motion associated with the hip joint (col. 1, lines 46-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a hip replacement system as taught by Sherman wherein the acetabulum-type cup member is the acetabulum replacement system of the combination of Bateman et al.-Kennedy et al. wherein so doing would amount to mere substitution of one functionally

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equivalent structure for another within the same art and the selection of any of these structures would work equally well in a conventional hip replacement system.

### *Response to Arguments*

Applicant's arguments filed on 6/9/03, Paper No. 4, have been fully considered but are not persuasive.

Applicant's arguments are not persuasive since they are directed to materials, irrelevant to the Applicant's invention, in the Kennedy reference and not to the teaching pertinent to the Applicant's invention that the adhesion between a polymeric layer and the underlying ceramic layer can be enhanced by surface preparation or texturing of the underlying ceramic layer.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (703) 306-4035. The examiner can normally be reached Monday through Friday between 8:30 am and 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached at (703) 308-2582. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-2708 for regular communications and (703) 308-2708 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

AR *Amunadhe Narana*  
July 30, 2003

  
EDUARDO C. ROBERT  
PRIMARY EXAMINER